

REMARKS

Claims 46-53, 56-65, and 68-70 are currently pending. Claims 46-47 and 58-59 have been amended and new claim 70 has been added.

Applicants acknowledge and appreciate the Examiner's indication that claims 47 and 59 contain allowable subject matter. Applicants have rewritten claims 47 and 59 in independent form. As such, claims 47 and 59 are in a condition for allowance.

The Examiner rejected claims 46, 48, 50, 53, 56-58, 60, 62, 65, and 68-69 under 35 U.S.C. §102(b) as being anticipated by Cousimano (U.S. Patent No. 4,302,935).

Amended claim 46 recites a tube configured to attach to an engine housing and to guide a fluid from an inlet to an outlet. The tube includes a first component that has an interior and a bend portion. The bend portion has a curved outer bend surface adjacent the interior and has a first inner bend surface adjacent the interior that has a sharp corner opposite the outer bend surface and spaced away from the inlet and the outlet. A second component is positioned adjacent the sharp corner and includes a curved surface that has a second inner bend surface. The second inner bend surface and the outer bend surface are opposite each other and cooperate to guide all of the fluid flow through the bend portion.

Applicants have amended claims 46 and 58 to recite that the inner bend surface and the outer bend surface are disposed opposite to each other. As noted by the Examiner, the claims did not require that the flow pass these two surfaces at the same time. The added limitation requires that the flow pass these two surfaces at about the same time.

Before discussing Cousimano, Applicants must respectfully address what is meant by the term "sharp corner." In Applicants' prior response, Applicants noted that the specification clearly defined the term "sharp corner." Specifically, Applicants state "Fig. 1 illustrates one

prior art tube 1 in section. As can be seen, the inner corner of the tube 2 is not radiused. This sharp corner creates turbulence and other flow losses that are undesirable.” *Specification, page 2, lines 10-12 (emphasis added)*. The Examiner argues that Fig. 1 refers “to a prior art invention and not specifically to the instant invention, therefore it is not clear that such a definition would apply to the actual instant invention” *See Office Action dated March 22, 2007, page 5-6*.

The fact that Applicants employed a prior art tube to illustrate the meaning of a sharp corner is irrelevant to the term’s meaning. The Background Section is as much a part of the disclosure as the Description Section and it can be used to define the meaning of terms. *See MPEP §2111 (discussing the need to review the entire description to determine the meaning of terms)*. In fact, the meaning of claim terms must also take into account what one of ordinary skill in the art would believe the term means. Where but the prior art would one of ordinary skill in the art develop this opinion regarding the meaning of a term. In addition, to the language quoted above, Applicants state “[t]o provide the best air/fuel mixture by reducing turbulent fluid flow, it is desirable to provide the smoothest flow path possible between the carburetor and the cylinder intake. Thus, straight tubes or tubes with smooth bends are preferred over typical tubes with relatively sharp or small inner radius bends.” *Application, page 1, lines 14-18*. Thus, Applicants have differentiated between a desirable simple tube with a smooth bend, as is taught for example by Jansen (U.S. Patent No. 5,992,465), and an undesirable tube that includes a sharp or small inner radius. Applicants further note “[t]he invention provides a smooth flow passageway to improve flow efficiency.” *Application, page 10, line 21*. Thus, Applicants have illustrated a prior art tube in Fig. 1 and described it as including a sharp corner that creates turbulence and other undesirable flow losses. Applicants then describe the invention as providing a smooth flow passage that improves efficiency. Without the sharp corner as that term

is defined by Applicants, there is no need for Applicants' invention. As such, the Examiner's definition of "sharp corner" renders the invention useless. As stated in the MPEP, "the pending claims must be 'given their broadest reasonable interpretation consistent with the specification.'" *MPEP §2111*. However, the definition of "sharp corner" relied upon by the Examiner is not consistent with the remainder of the specification and is not the definition one of ordinary skill in the art would apply after reading the specification.

Cousimano does not teach or suggest, among other things, a tube that includes a first component that has a bend portion that includes a curved outer bend surface adjacent an interior and a first inner bend surface adjacent the interior that has a substantially sharp corner opposite the outer bend surface and spaced away from the inlet and the outlet. In addition, Cousimano does not teach or suggest a second component positioned adjacent the sharp corner and including a curved surface that includes a second inner bend surface arranged such that the outer bend surface and the second inner bend surface cooperate to guide all of the fluid flow through the bend portion, wherein the flow passes the outer bend surface and the inner bend surface at substantially the same time.

Rather, Cousimano discloses a tube T and an insert A. The tube does include a bend that defines an outer bend surface and an inner bend surface. However, the inner bend surface does not include a sharp corner opposite the outer bend surface and spaced away from the inlet and the outlet. The only sharp corner of the first component is the flange corner which is not disposed away from the inlet and the outlet, but rather makes up part of the inlet or the outlet. Thus, it is clear that Cousimano does not teach or suggest a sharp corner as defined by Applicants and positioned as recited in claim 46.

Furthermore, Applicants have amended claim 46 to recite that the outer bend surface and the inner bend surface are disposed opposite each other, so that the flow passes both surfaces at substantially the same time. The Examiner argues that Cousimano discloses an arrangement in which the tube T defines an outer bend surface and the insert A defines an inner bend surface. However, these components are arranged such that the flow passes the insert prior to reaching the outer bend surface. As such, the flow does not pass the outer bend surface and the inner bend surface at substantially the same time.

In light of the foregoing, Cousimano does not teach or suggest each and every limitation of claim 46. As such, claim 46 is allowable over Cousimano. In addition, claims 48-53 and 56-57 depend from claim 46 and are allowable over Cousimano.

Amended claim 58 recites a tube configured to attach to an engine housing and to guide a fluid along a tube interior from an inlet to an outlet. The tube includes a bend portion that has a curved outer bend surface adjacent the interior and a curved inner bend surface adjacent the interior. The tube includes a first component that defines the outer bend surface and a sharp corner opposite the outer bend surface, spaced away from the inlet and the outlet, and adjacent the interior. A second component is positioned adjacent the sharp corner and includes a curved surface that at least partially defines the curved inner bend surface. All of the fluid passes between the curved inner bend surface and the curved outer bend surface because the surfaces are disposed opposite each other. The flow passes the outer bend surface and the inner bend surface at substantially the same time.

Cousimano does not teach or suggest a tube that includes a first component that defines the outer bend surface and a sharp corner opposite the outer bend surface, spaced away from the inlet and the outlet, and adjacent the interior. As discussed with regard to claim 46, the

Examiner's argument is based on the incorrect determination that a change in the direction of flow of about 90-degrees constitutes a sharp corner. Applicants have pointed out the description of a "sharp corner" in the specification. *See Specification, page 2, lines 10-12.* Thus, Cousimano does not teach or suggest a sharp corner as defined by Applicants and positioned as recited in claim 58.

In addition, Cousimano does not teach or suggest the flow passing the outer bend surface and the inner bend surface at substantially the same time. The Examiner argues that Cousimano discloses an arrangement in which the tube T defines an outer bend surface and the insert A defines an inner bend surface. However, these components are not disposed opposite each other, but are arranged such that the flow passes the insert prior to reaching the outer bend surface. As such, the flow does not pass the outer bend surface and the inner bend surface at substantially the same time.

In light of the foregoing, Cousimano does not teach or suggest each and every limitation of claim 58. As such, claim 58 is allowable over Cousimano. In addition, claims 60-65 and 68-69 depend from claim 58 and are allowable over Cousimano.

The Examiner rejected claims 46, 48, 50, 53, 56-58, 60, 62, 65, and 68-69 under 35 U.S.C. §102(b) as being anticipated by Reed (U.S. Patent No. 1,300,015).

Reed does not teach or suggest, among other things, a tube that includes a first component having a curved outer bend surface adjacent the interior and a first inner bend surface adjacent the interior that has a substantially sharp corner, and a second component positioned adjacent the sharp corner and including a curved surface that has a second inner bend surface arranged such that the second inner bend surface and the outer bend surface are disposed

opposite each other and cooperate to guide all of the fluid flow through the bend portion, so that the flow passes the outer bend surface and the inner bend surface at substantially the same time.

Rather, Reed discloses a mixer that includes a manifold 1 that makes a 90-degree bend before connecting to a valve chamber 2. A mixing device positioned within the manifold includes a ring 6 and a plurality of blades 7 (best illustrated in Fig.1) that induce a swirl in the fluid as it passes through the mixer. Reed does not teach or suggest positioning the mixer adjacent a sharp corner such that all of the flow is guided by an outer bend surface of the manifold disposed opposite to an inner bend surface of the mixer and passes the outer bend surface and the inner bend surface at substantially the same time. The Examiner has identified the ring member 6 as defining an inner bend surface. However, the ring 6 is not positioned adjacent the outer bend surface, thereby allowing the flow to pass the outer bend surface before passing the ring 6. As such, the flow does not pass the outer bend surface and the inner bend surface at substantially the same time.

In light of the foregoing, Reed does not teach or suggest each and every limitation of claim 46. As such, claim 46 is allowable over Reed. In addition, claims 48-53 and 56-57 depend from claim 46 and are allowable over Reed.

Amended claim 58 recites a tube configured to attach to an engine housing and to guide a fluid along a tube interior from an inlet to an outlet. The tube includes a bend portion that has a curved outer bend surface adjacent the interior and a curved inner bend surface adjacent the interior. The tube includes a first component that defines the outer bend surface and a sharp corner opposite the outer bend surface, spaced away from the inlet and the outlet, and adjacent the interior. A second component is positioned adjacent the sharp corner and includes a curved surface that at least partially defines the curved inner bend surface. All of the fluid passes

between the curved inner bend surface and an opposite, curved outer bend surface. Thus, flow passes the outer bend surface and the inner bend surface at substantially the same time.

Reed does not teach or suggest a second component positioned adjacent a sharp corner and including a curved surface that at least partially defines the curved inner bend surface such that all of the fluid passes between the curved inner bend surface and an opposite, curved outer bend surface, the flow passing the outer bend surface and the inner bend surface at substantially the same time. Rather, Reed discloses a mixer positioned within a manifold. The mixer includes a plurality of blades 7 connected to a ring 6 and arranged as illustrated in Fig. 1. The Examiner identifies the ring 6 as being the component that defines the inner bend surface. However, the ring 6 is positioned downstream of the outer bend surface and not opposite to it, such that the flow does not pass the outer bend surface and the inner bend surface at substantially the same time.

In light of the foregoing, Reed does not teach or suggest each and every limitation of claim 58. As such, claim 58 is allowable over Reed. In addition, claims 60-65 and 68-69 depend from claim 58 and are allowable over Reed.

The Examiner rejected claims 46, 48, 49, 57, 58, 60, 61, and 69 under 35 U.S.C. §102(b) as being anticipated by Jansen (U.S. Patent No. 5,992,465).

Jansen does not teach or suggest a tube that includes a first component including an interior and a bend portion, the bend portion having a curved outer bend surface adjacent the interior and having a first inner bend surface adjacent the interior that has a sharp corner opposite the outer bend surface and spaced away from the inlet and the outlet. In addition, Jansen does not teach or suggest a second component positioned adjacent the sharp corner and including a curved surface that has a second inner bend surface, the second inner bend surface and the

outer bend surface being disposed opposite to each other and cooperating to guide all of the fluid flow through the bend portion, so that the flow passes the outer bend surface and the inner bend surface at substantially the same time.

Rather, Jansen discloses a flow system that includes a conduit 10 and three flow inducing portions 12, 14, and 16. The flow inducing portions include a plurality of vanes that guide the fluid through the elements as desired. However, there is no sharp corner opposite an outer bend surface and spaced apart from the inlet and the outlet. As such, the flow inducing portions 12, 14, 16 cannot be positioned adjacent the sharp corner.

Furthermore, there is no outer bend surface defined by the conduit 10 and inner bend surface defined by the flow inducing portions 12, 14, 16 through which all of the fluid flows and positioned such that the fluid passes both surfaces at substantially the same time.

In light of the foregoing, Jansen does not teach or suggest each and every limitation of claim 46. As such, claim 46 is allowable over Jansen. In addition, claims 48-53 and 56-57 depend from claim 46 and are allowable over Jansen.

Claim 58 recites a first component that defines the outer bend surface and a sharp corner opposite the outer bend surface, spaced away from the inlet and the outlet, and adjacent the interior. A second component is positioned adjacent the sharp corner and includes a curved surface that at least partially defines the curved inner bend surface. All of the fluid passes between the curved inner bend surface and the opposite, curved outer bend surface. Thus flow passes the outer bend surface and the inner bend surface at substantially the same time.

As discussed with regard to claim 46, Jansen does not teach or suggest a sharp corner and as such cannot teach or suggest positioning the flow inducing elements 12, 14, 16 adjacent the sharp corner. Additionally, there is no outer bend surface defined by the conduit 10 and inner

bend surface defined by the flow inducing portions 12, 14, 16 through which all of the fluid flows and positioned such that the fluid passes both surfaces at substantially the same time.

In light of the foregoing, Jansen does not teach or suggest each and every limitation of claim 58. As such, claim 58 is allowable over Jansen. In addition, claims 60-65 and 68-69 depend from claim 58 and are allowable over Jansen.

The Examiner rejected claims 51-52 and 63-64 under 35 U.S.C. §103(a) as being unpatentable over Cousimano, Reed, or Jansen.

Claims 51-52 depend from claim 46 and claims 63-64 depend from claim 58. As discussed with regard to the 35 U.S.C. §102(b) rejections, neither Cousimano, Reed nor Jansen teach or suggest each and every limitation of claims 46 or 58, much less those of claims 51-52 or 63-64.

In light of the foregoing, Cousimano, Reed, and Jansen, alone or in combination do not teach or suggest each and every limitation of claims 46 or 58. As such, claim 46 and 58 are allowable. In addition, claims 51-52 and 63-64 depend from claims 46 and 58 and are also allowable.

New claim 70 includes the limitations of claim 47 prior to this amendment and claim 49. As such, this new claim was rejected as being anticipated by Jansen.

The Examiner argues that Jansen discloses “a first component 10 in the form of a pipe with a sharp 90 degree turn forming an inner sharp bend and an outer bend.” *Office action dated March 22, 2007, page 4.* However, Applicants do not claim “a sharp 90 degree turn” or “an inner sharp bend.” Rather, Applicants claim “a first inner bend surface adjacent the interior that has a *sharp corner*.” Thus, the Examiner’s own argument seems to support Applicants contention that “sharp corner” means something other than a 90 degree angular turn. The

Examiner does not argue that Jansen discloses a “sharp corner” spaced away from the inlet and the outlet. Rather, the Examiner is forced to use slight modifications of the actual claim language to support the rejection because Jansen does not teach or suggest a sharp corner as that term would be understood in the art.

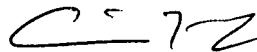
In light of the foregoing, Jansen does not teach or suggest each and every limitation of claim 70. As such, new claim 70 is allowable.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that claims 46-53, 56-65, and 68-70 are allowable.

The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,



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